# ENGINEERING CHANGE PROPOSAL (SHORT FORM)

*(See MIL-STD-481 for instructions)*

| DATE *(YYYYMMDD)* | *Form Approved* |
|---|---|
| 20040201 | *OMB No. 0704-0188* |

**PROCURING ACTIVITY NUMBER**
**N/A**



**1. ORIGINATOR NAME AND ADDRESS**
**Lance Delahaye**
**Software Engineer**
**Oscmar Intl NZ**

**2. CONTRACT NUMBER AND LINE ITEM**

**3. PROCURING CONTRACTING OFFICER**
CODE | TEL

**4. TITLE OF CHANGE**
Bin Renumbering

| 5. ECP NUMBER | REV | AMEND | 6. CAGE CODE | 7. CLASS OF ECP | 8. JUST.CODE | 9.PRIORITY |
|---|---|---|---|---|---|---|
| MCC 2004001 | | | | | | High |

**10. SPECIFICATIONS AFFECTED**

| CAGE CODE | SPECIFICATION / DOCUMENT NO. | REV |
|---|---|---|
| | PMT 90-S002 | H |
| | | |
| | | |

**11. DRAWINGS AFFECTED**

| CAGE CODE | NUMBER | REV |
|---|---|---|
| | | |
| | | |
| | | |

**12. CONFIGURATION ITEM NOMENCLATURE / TYPE DESIGNATION / WEAPON SYSTEM CODE**
**N/A**

**13. IN PRODUCTION**
[ ] YES [X] NO

**14. LOWEST ASSEMBLY AFFECTED**

| NOMENCLATURE | PART NO. | NSN |
|---|---|---|
| N/A | | |

**15. DESCRIPTION OF CHANGE (Attach a document showing [a] existing document paragraph, figure, or table and [b] modified document paragraph, figure, or table with the change incorporated).**

**The numbering sequence on figure 2 is incorrect needs to be changed from 1-16 to 0-15 as the text in 3.2.1.1 states. The other accompanying text needs to reflect these changes also. Change Bin 1 to Bin 0 in paragraphs 3.2.1.1, 3.2.1.2.2, 3.2.1.3, 3.2.1.3.1 and Figure 2. Para 3.2.1.2.2 needs to change "14, 15, or 16" to "13, 14, or 15."**

**16. NEED FOR CHANGE**
**The bin numbering is incorrect and needs to be changed to reflect the proper bin numbering or designers building MILES equipment will not be able to work with existing MILES equipment.**

**17. EFFECT ON ASSOCIATED EQUIPMENT**
**If proposed documentation change is not made new MILES equipment will not work with older MILES equipment.**

**18. PRODUCTION EFFECTIVITY BY SERIAL NUMBER**

**19. EFFECT ON PRODUCTION DELIVERY SCHEDULE**

**20.RECOMMENDED RETROFIT EFFECTIVITY**

**21. ESTIMATED KIT DELIVERY SCHEDULE**

**22. ESTIMATED COST/SAVINGS**

**23. SUBMITTING ACTIVITY AUTHORIZING SIGNATURE**

**23.a. TITLE**

**24. APPROVAL/DISAPPROVAL** a. RECOMMENDED [X] APPROVAL [ ] DISAPPROVAL

| b. APPROVAL | c. GOVERNMENT ACTIVITY | SIGNATURE | DATE *(YYYYMMDD)* |
|---|---|---|---|
| [ ] APPROVED<br>[ ] DISAPPROVED | PEOSTRI | | |
| **d. APPROVAL** | **e. GOVERNMENT ACTIVITY** | **SIGNATURE** | **DATE *(YYYYMMDD)*** |
| [ ] APPROVED<br>[ ] DISAPPROVED | | | |

**15a. Existing document paragraph, figure, or table.**

**3.2.1.1 Word Time Base.**

The Word time base clock rate is 48KHz +/-0.015%. The word time base is partitioned into 11 Time Slots labeled 0,1, 2, ... 10. The Time Slot duration is 333.3 μs +/- 0.015% based on the on the 3KHz sub-harmonic of the 48KHz time base clock. Each Time Slot is further subdivided into 16 time intervals; each referred to as a Bin. The Bins are numbered by convention 1, …16. Each Bin has time duration of 20.83 μs +/- 0.015% based on the fundamental 48KHz-clock frequency. The Word has a total duration of 3.667 ms +/-0.015%. Refer to Figure 1(below).

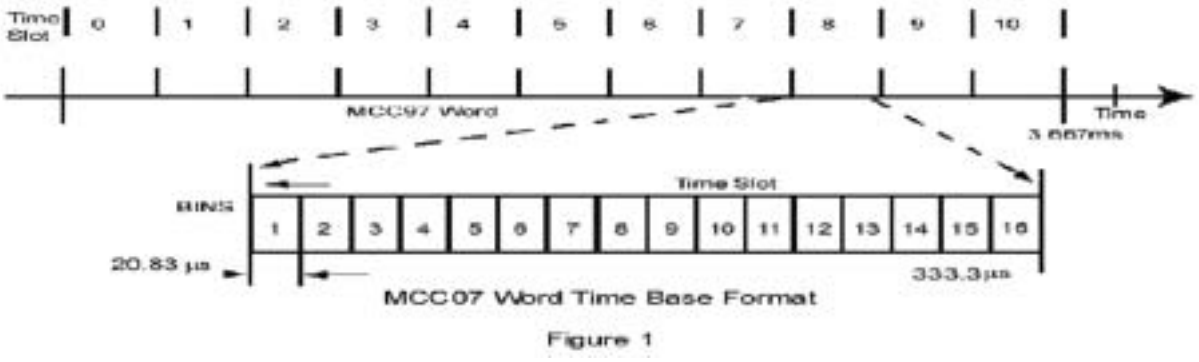


Figure 1

3.2.1.2.2 Bit Positioning.

Logic State 1 is positioned only in Bin 1, 6, 8, or 10 of a Time Slot and:

a. A Word will NEVER have a valid Logic State 1 positioned in Bin 2, 3, 4, 5, 7, 9, 11, 12, 13, 14, 15 or 16.
b. There will NEVER be more than two Logic State 1 in any Time Slot.
c. A valid Word will ALWAYS have a Logic State 1 in the Bin 1 of its first two Time Slots (Time Slot 0 and Time Slot 1) and a Logic State 0 in Bin 1 of the third Time Slot (Time Slot 2).

## 3.2.1.3 MCC Word Code Designator.

The MCC Word Code Designator uniquely specifies the exact MCC Word bit pattern positioned in its time base. It has the format X.YZ.SPID where:

**a.** **X** is a decimal number from 00 to 36, each of which identifies a specific Basic MILES Code bit pattern as listed in Appendix A. Each Logic State 1 in Appendix A is always positioned in a Bin 1 of any Time Slot of a MCC Word in which it occurs.

### 3.2.1.3.1. Example MCC Word Designator Translation to Its Bit Pattern

For example, the bit pattern for Word, 12.1A.211, illustrated in Figure 2, translates as follows:

a. The first two digits, 12, is **X**, the Basic Miles Code bit pattern. Look this up in Appendix A under the entry X = 12. Each Logic State 1 is positioned in Bin 1 of the Time Slot corresponding to its column position in Appendix A. A Logic State 1 in column D0 is positioned in Bin 1 of Word Time Slot 0, etc.

**15b. Modified document paragraph, figure, or table with the change incorporated.**

## 3.2.1.1 Word Time Base.

The Word time base clock rate is 48KHz +/-0.015%. The word time base is partitioned into 11 Time Slots labeled 0,1, 2, ... 10. The Time Slot duration is 333.3 µs +/- 0.015% based on the on the 3KHz sub-harmonic of the 48KHz time base clock. Each Time Slot is further subdivided into 16 time intervals; each referred to as a Bin. The Bins are numbered by convention 0, 1,…15. Each Bin has time duration of 20.83 µs +/- 0.015% based on the fundamental 48KHz-clock frequency. The Word has a total duration of 3.667 ms +/-0.015%. Refer to Figure 1(below).

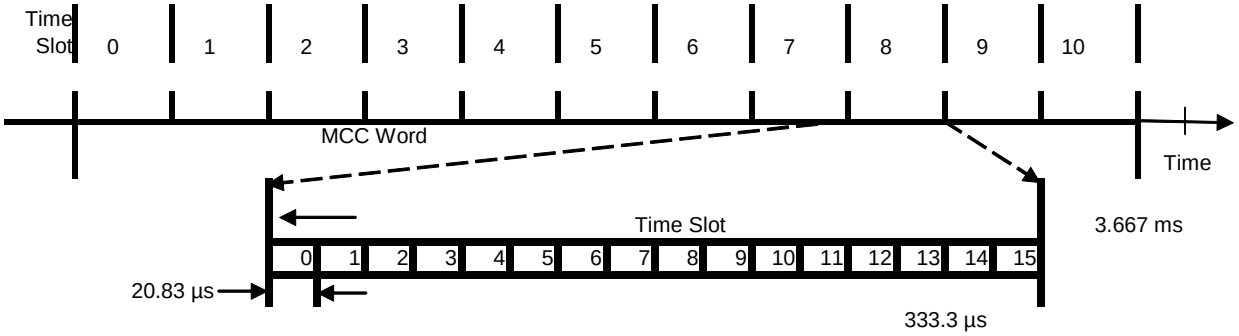


**Figure 1: MCC Word Time Base Format**

3.2.1.2.2. Bit Positioning.

Logic State 1 is positioned only in Bin 0, 6, 8, or 10 of a Time Slot and:

a. A Word will NEVER have a valid Logic State 1 positioned in Bin 1, 2, 3, 4, 5, 7, 9, 11, 12, 13, 14 or 15.

b. There will NEVER be more than two Logic State 1 in any Time Slot.

c. A valid Word will ALWAYS have a Logic State 1 in the Bin 0 of its first two Time Slots (Time Slot 0 and Time Slot 1) and a Logic State 0 in Bin 0 of the third Time Slot (Time Slot 2), except for code E1 (special codes) which has a Logic State 1 in Bin 0 of the third Time Slot (Time Slot 2).

## 3.2.1.3 MCC Word Code Designator.

The MCC Word Code Designator uniquely specifies the exact MCC Word bit pattern positioned in its time base. It has the format X.YZ.SPID where:

a. **X** is a decimal number from 00 to 36, each of which identifies a specific Basic MILES Code bit pattern as listed in Appendix A. Each Logic State 1 in Appendix A is always positioned in a Bin 0 of any Time Slot of a MCC Word in which it occurs.

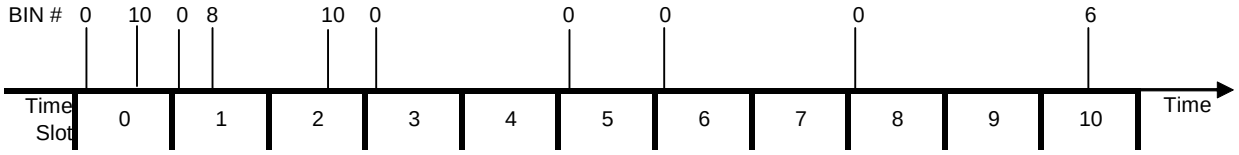


**Figure 2: MCC Word 12.1.A.211 Bit Pattern**

3.2.1.3.1 For example, the bit pattern for Word, 12.1A.211, illustrated in Figure 2, translates as follows:

a. The first two digits, 12, is **X**, the Basic Miles Code bit pattern. Look this up in Appendix A under the entry X = 12. Each Logic State 1 is positioned in Bin 0 of the Time Slot corresponding to its column position in Appendix A. A Logic State 1 in column D0 is positioned in Bin 0 of Word Time Slot 0, etc.